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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,262	08/30/2001	Tohru Ishitani	1743/193	8263

26646 7590 09/05/2003

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EXAMINER

NGUYEN, LAM S

ART UNIT PAPER NUMBER

2853

DATE MAILED: 09/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/943,262

Applicant(s)

ISHITANI ET AL.

Examiner

LAM S NGUYEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: FIG. 1 does not include all reference signs. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 8-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Kakibayashi et al. (US 5866905).

Kakibayshi et al. disclose a scanning charged-particle microscope (FIG. 18) having:

a charged-particle source (FIG. 18, element 20),

a lens for focusing the charged-particle beam emitted from said charged-particle source (FIG. 18, element 21), and

a scanning deflector (FIG. 18, elements 1022), for scanning said charged-particle beam in two-dimensional form on a sample (FIG. 18, element 24),

wherein said scanning charged-particle microscope is characterized in that an

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aperture for limiting the passage of said charged-particle beam is formed in two different places on the orbit thereof, and in that one of said two apertures is an annular aperture (FIG. 20, element 409) and the other is circular aperture (FIG. 20, element 410).

Referring to claim 9: wherein the scanning charged-particle microscope is characterized in that said annular aperture is formed in a plated-like body (FIG. 21, element 409), in that said plate-like body is also provided with a circular aperture (FIG. 21, element 409), and in that there is provided a movement feature for positioning the annular aperture and circular aperture on the orbit of said charged-particle beam (FIG. 20: a corresponding movement feature to move a desired aperture in the body 409 into the orbit of the electron beam).

Referring to claims 10, 11: wherein the scanning charged-particle microscope is characterized in that said circular aperture and said annular aperture are formed in a first plate-like body and a second plate-like body, respectively, in that said first plate-like body is provided with a charged-particle optical beam cutoff portion in addition to the circular aperture (FIG. 20, element 410) and said second plate-like body is provided with a circular aperture in addition to the annular aperture (FIG. 20-21, element 409), and in that both the first plate-like body and the second plate-like body are provided with a movement feature (FIG. 20: a corresponding movement feature to move a desired annular aperture in the body 409 and a desired circular aperture in the body 410 into the orbit of the electron beam).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7, 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kakibayashi et al. (US 5866905) in view of Kokubo (US 4608491).

Kakibayashi et al. disclose the claimed invention as discussed above and also disclose wherein said scanning charged-particle microscope is characterized in that a passage aperture for limiting the passage of the charged-particle beam and in that a member for limiting the passage of the charged-particle beam is provided at least in the center of said passage aperture (FIG. 20, element 409) (**Referring to claim 1**), the half-opening angle of said aperture for said charged-particle beam focused on a sample by said focusing lens has a band with respect to specific values of α_a and α_b and said band having narrower values of said half-opening angle is cut off (column 19, line 14-51) (**Referring to claims 2, 5**), and a plate-like aperture body formed movably with respect to said charged-particle beam in which an annular aperture and a circular aperture are formed (FIG. 20, element 409) (**Referring to claims 3-4, 6-7**).

However, Kakibayashi et al. do not disclose wherein the annular aperture is positioned on the orbit of the charged-particle beam and between said charged-particle source and said scanning deflector.

Kokubo discloses an electron microscope having an annular aperture positioned on the orbit of a charged-particle beam and between a charged-particle source and a scanning deflector (FIG. 1, element M).

Therefore, it would have been obvious for one having ordinary skill in the art at the time the invention was made to modify the electron microscope disclosed by Kakibayashi et al. such that the annular aperture is positioned on the orbit of a charged-particle beam and between a

charged-particle source and a scanning deflector as disclosed by Kokubo. The motivation of doing so is to collect all the scattered wave having the same scattering angle to produce an image as taught by Kokubo (column 1, line 20-26).

Response to Arguments

Applicant's arguments with respect to claim 1, 5, 8, and 12 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAM S NGUYEN whose telephone number is (703)305-3342. The examiner can normally be reached on 7:00AM - 3:30PM.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, STEPHEN D. MEIER can be reached on (703)308-4896. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3431 for regular communications and (703)305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

LN

August 23, 2003



Stephen D. Meier
Primary Examiner